HEALTH

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EDITORIAL

Cancer and How to Combat it

CANCER is another dreadful disease which afflicts human beings and carries a heavy toll. Cancer is defined as 'a malignant tumour, made up chiefly of epithelial cells'. Carcinoma is another name by which it is known. There are many varieties of cancer, with which we need not concern ourselves here, but we come across generally of the cancer of the mouth and tongue, due to the constant chewing of betel-leaf, to be found generally among Indians, cancer of the lip called the Smokers' Cancer, due to the irritation by the pipe stem, cancer of the breasts, in women, resulting from irritation in the nipples, and cancer of the abdominal and genital organs.

A brief Historical Survey of the Causation of Cancer.—It was at one time held that *worry* was the cause of cancer. Worry is no doubt the cause of several diseases which human flesh is heir to and, therefore, there must be some modicum of truth in the old belief that worry caused cancer. "A slight throat cough is at once thought to be consumption—a tiny pimple is believed to be a cancer. Such worry is really liable to induce the very disease which is dreaded". DR. HERBERT SNOW of the Cancer Hospital, London, opined that worry was the chief exciting cause of cancer.

Next to worry came *malnutrition*. "The last disease of uncertain origin to be claimed in the list of diseases of malnutrition through perverted nerve action is cancer and the claim is plausible, as will soon be shown; but first let it be said that cancer as yet appears to consist of nothing but the body's own cells gone wrong and there is no proof of the presence of any parasitic or microbic invaders. The cellular elements of a tumour are derived from the pre-existing cells of

the body which for some cause have reverted to a rudimentary or simple state of life and begun to increase and multiply regardless of other parts, as though their neuronic guardians had lost all control of them. It is a sort of war among our tissue elements in which one kind proceeds to run wild at the expense of the rest. There are many studious observers who believe that the various forms of tumours are

A case of buccal (pertaining to the cheek) and lingual (pertaining to the tongue) carcinoma.

but the result of some failure of the trophic nerves whose duty it is to regulate nutrition and cell growth, and this view is encouraged by the fact that cancer increases in frequency as age advances and as vital power declines, that mental and nervous depressions are predisposing causes, and finally the fact that it is most prevalent and increasing in conditions of high pressure civilization, involving nerve-strain, tiredness and exhaustion."

Another curious cause of cancer was some decades ago thought to be *vaccination*! The propounder of this theory was one DR. W. B. CLARKE of Indianapolis, Ind. His argument ran thus: "It takes twenty one years or more to make a man and from three or four to make a cow. As cancer is a disease characterized by the rapid imposition of cells, is it safe to put the rapid growing cells or protoplasm of a diseased animal into the slow-growing cells of a man as is done in vaccination?" DR. CLARKE believed that 'deaths from cancer are more numerous in England and Prussia, simply because the pernicious practice (of vaccination for smallpox) was generally introduced so much earlier there!' We may at once dismiss this theory as unscientific and unsustainable, judging from the realities of the present-day world.

A fourth cause was said to be *highfeeding*. DR. W. ROGER WILLIAMS observed in the London *Lancet* thus: "There can be no doubt that the greed for food manifested by modern communities is altogether out of proportion to their present requirements. Many indications point to the gluttonous consumption of meat, which is such a characteristic feature of the age, as likely to be especially harmful in this respect. Statistics show that the consumption of meat has for many years been increasing by leaps

and bounds, till it now has reached the amazing total of 131 lbs. per head per year, which is more than double what it was half a century ago, when the conditions of life were more compatible with high feeding. When excessive quantities of such highly stimulating forms of nutriment are ingested by persons whose cellular metabolism is defective, it seems probable that there may thus be excited, in those parts of the body where vital processes are still active, such excessive and disorderly cellular proliferations as may eventuate in cancer. No doubt, other factors co-operate and among those I should be especially inclined to name deficient exercise and probably also deficiency in fresh vegetable food."

Lastly came the *carbohydrate* for indictment. DR. WILLIAM D. MEEK in his book 'Diet and Disease' said: "Some investigators of the problem of the etiology of cancer believe an improperly balanced diet plays an important role as predisposing factor. The writer has studied the dietetic histories of a great many of these cases, and invariably has found that the development of cancer was preceded by a series of digestive and other disturbances which are usually met with in people who use an excessive carbohydrate diet. If the hypothesis could be substantiated (as many believe) that systemic toxæmia due to an unbalanced diet is a predisposing factor, a reasonable explanation of tumour development is as follows:—

The location of the circulating toxins (as in rheumatic phenomena) is determined to areas of chronic irritation or traumatism, and have an inhibitive or destructive action on the nerve influence which controls the orderly arrangement of cell growth during tissue repair. Cell growth then proceeds in an uncontrolled manner and in disorderly arrangement, leading to tumour formation. It is probable that in addition to excessive carbohydrate consumption, deficiencies in other factors, such as vitamins in ill-balanced diets are contributory factors. There appears to be no doubt that the cancer rate is increasing throughout the civilized world and running parallel with the increased consumption of refined foods, which are largely carbohydrate in character and deficient in many important elements."

Whatever the cause, the spread of cancer is due to its insidious nature and to the patient's "hush, hush" policy, as in the case of sexual diseases, until the last stage is reached when control and cure become up-hill tasks and fatality is certain.

For want of space, we reserve further consideration of the subject for the next issue.

Cancer—Its Symptoms and Diagnosis

"Any sore, ulcer or hard area in the mouth, tongue or cheeks demands investigation if it does not heal or disappear within a few weeks, especially if the patient is in middle life or beyond. The same statement applies to the skin surface generally. Taking the two sexes together, the form of cancer which causes more deaths than any other is that which involves some part of the digestive system, such as the stomach, liver or intestinal canal. In general the early warnings of cancer in these organs come in the form of a digestive disturbance, such as loss of appetite, loss of weight, discomfort after eating, flatulence and increasing constipation. If the disease is in the rectum or large bowel, bleeding on defecation may be noted, and the person may explain this to himself as probably due to hæmorrhoids or piles. While this assumption is often true, it is important to remember that the cause of such bleeding from the bowel may be of more serious nature and that the proper examination should be sought and the cause of bleeding determined at once."—BY EMIL NOVAK—*Hygeia.*

THE HYGIENE OF THE BOWELS

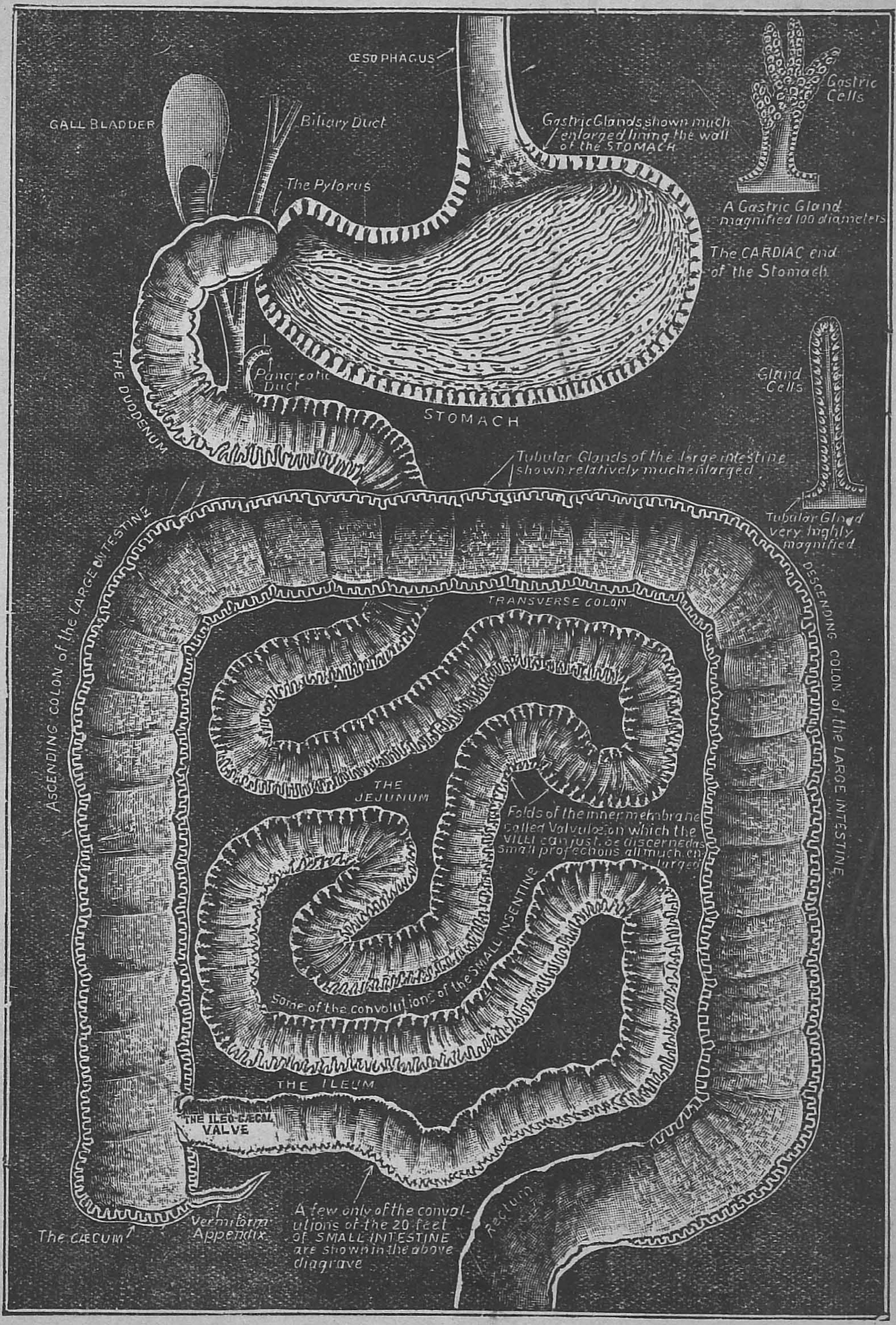
BY G. RAMAN PILLAI, M.B., Ch.B., (Edin.),

TRIVANDRUM.

To be frank, the theme is '**Constipation**', an unsavoury subject, however elegantly camouflaged in the language of euphemism in order to pass the censor of social taboo. **Health** cannot mince words when the welfare of individuals and the race is at stake, whatever the proprieties or otherwise of orthodox convention. People now-a-days want to know the why and the wherefore of everything they are asked to believe or do. If satisfying reasons are not forthcoming, the chances are that they would reject all dogma, and throw overboard commandments and prescriptions and all that is not made obvious to their intelligence. Between the die-hard moralist who frantically opposes all 'new-fangled' knowledge, and the cultured public that would have no more of dogma without satisfying reasons, we are in a fair way to work havoc with both our health and our morals. Science can come to the rescue of both if we but realize that we are not working at cross purposes, but only for the welfare of the race. Does not this seemingly proclaimed antagonism engender in us a distrust of both,—to the credit of neither, and to the undoing of man? The sooner we realise their identity of interests, the better for the future of the species.

Nature's Plan Revealed. — More than a half of humanity has experienced the discomforts of constipation, or sluggish bowel action, some time or other; and many of us often return from our visits to the privy disappointed 'defeatists', or confirmed fatalists, ready to grasp at any way out of the *impasse*, by hook or by crook, through medicines or machines for extraction. Medical research has discovered some of the secrets of nature through facts observed by experiment, instead of by meditation without accurate data. Among other things, the X-ray has revealed that, in health, a meal traverses our digestive canal (which is about 26 feet in length) in gradual, imperceptible stages, the refuse matter reaching the bowel (colon—six feet long) in from ten to thirty hours. A too rapid movement of food (before the digestive juices act on it) signifies indigestion; and a very much delayed movement means fermentation and absorption of poisons and possibly the entry of germs lurking in the bowels into the blood. Refuse matter accumulates in the colon, as the house-refuse is gathered in the dust-bin in the street. Our 'dust-bin' (colon) also should be emptied and cleaned at least once in the day. Some people eject a few pellets and consider they have done their duty even when the colon is still loaded! To hasten the progress of the contents of the canal unduly by the indiscreet use of purgatives or by improper diet would impair the nutrition of the body. The movements of the contents of the canal under the influence of various foods and laxatives can now be visualized under the X-ray, as also the action of enemas that are used in washing it out. The wonderful (peristaltic) waves of contraction of the muscular 'bangles' of the canal start at the top and travel downwards, wringing down and advancing the contents to segments below in regular purposive order. These waves of contraction go on, fortunately without

our knowledge, while we can attend to our daily duties. But purgatives and irritating foods excite abnormal and conscious contractions (colic or griping pains) that may continue for several hours and interfere with our



THE DIGESTIVE ORGANS.

A

digestion. Fortunately again, the unconscious contractions in health are not pushed incontinently downward to the very exit passage (as in the birds and beasts that evacuate their bowels anywhere and any time). Our social life is possible because of the provision of a collecting reservoir or dust-bin (colon); and also by the design of a chamber called "Rectum (shown in the sketch). This muscular chamber (or pump)is so constructed that in health it is empty and its walls are very sensitive and contract upon any mass as soon as it enters it. Thanks to this watchful sentinel, we get timely notice of the " call of nature " to go to stool. This reflex action resembles the reflex call to cough up and expectorate as soon as our phlegm enters the throat. And if the notice is disregarded, as is too often done in the modern life of hustle and bustle,this sensitive reflex mechanism is lulled, and the rectum loses its chief function of the active sentinel that senses and propels the contents, and becomes a passive reservoir like the colon above it. This automatic or independent physiological function of the rectum, so delicately adjusted by nature, is thrown out of gear by our wilful interference, resulting in a missed motion, a disaffected rectum, and the vicious cycle of 'constipation—purgative — constipation'. In many a case of constipation, a thwarted and ill-used rectum is the chief cause of the stagnation ; and in these cases, it is unnecessary to create a tempest in the entire tract above it by resorting to a general purgative. The seemingly simple neglect of the natural impulse, confirmed into a habit, can thus lead to far-reaching consequences. A urine-bladder overfilled by ignoring the natural impulse has to be emptied by artificial (surgical) aid. The organs of generation wedged in between the rectum and bladder may be harassed and injured by our neglect. How is disease to be prevented if people defy or trifle with their physiology ? We now understand this mechanism ; and can see why we should not repress the impulse to stool. The colon gets its first stimulus of the day to commence its function through our body movements on waking up, the resumption of the erect posture, and also by the stimulus of the first meal or a cigar. The healthy rectum is competent to procure us our daily motion if it is not over-ruled by our will. All local self-government fails when the central will overrides the decisions of the " agent on the spot ! "

Cleanliness is more than Skin deep. —Nature abhors dirt in or near living beings. Our senses notify us of the presence of dirt through the vision or smell No animal can sustain life or health in prolonged presence of its excrement. A mere body wash alone does not make for cleanliness. We have to eject the refuse within us that can poison our blood and tissues by prolonged contact ; we have also to remove refuse and dirt from our surroundings as well. To discharge our excreta on a river bed and to take a bath in the river and then skip over the droppings on our way back—this is not the cleanliness that is 'next to godliness'. The house cannot be clean if the privy is unclean. It may seem paradoxical to talk of keeping clean a privy where our motions find a lodgment. Filth decomposes much more rapidly in the open air (than inside a healthy bowel) and vitiates the air we breathe in and the soil we live on. Filth decomposing may be excellent manure for vegetables ; but it is by no means, a ' tonic ' for our lungs and our blood! If we dirty our neighbour's door, our neighbour returns the compliment. The privy should also be cleaned so that others, who follow us, may be invited to answer their 'calls' instead of being repelled. Give everyone a decent chance of defecating without

injury or inconvenience to others. It is not enough to shut our eyes and noses and curse the perpetrators of nuisance ; it is necessary to educate the social conscience in schools and homes and in the public highway, and to provide adequate conveniences to those needing it. The visit to the privy should be a deliberate and purposive act, and not a casual one that smothers and represses the natural impulse.

A Satisfactory Motion.—This depends on the nature of the diet and on past arrears of accumulation. About an eighth or tenth of what we eat is discharged as refuse. Among vegetarians in India a motion on the average weighs about twelve ounces. This does not mean that all of us should insist on the three-quarter pound every day ! Meat diet reduces the quantity, especially with reduced vegetable intake. Everyone has experienced the feeling of relief of tension and general exhilaration after the colon is emptied. The "Kruschen feeling" is not an unmixed luxury or security felt by the dramatic effect of the saline purgative. A healthy motion should be, solid but not dry, and be coloured brownish-yellow and well formed and moulded by the colon—as most of us have seen it too often advertised for our edification on the roadsides ! It should not have too offensive an odour pointing to prolonged stagnation and decomposition. The habit of observation of our own motions is a self-education to guide us as regards the state of our alimentation. The modern water-closet in one sense snatchas away from us this means of instruction—if our time-honoured practice on the roadside errs in the opposite direction. The mother learns a great deal about the digestion of her babe if she studies its motions.

The Alimentary Canal — Not a Drain Pipe.—Our bowels are not a passive drainage pipe or a scavenger lane. They form a vital organ that has to perform its own scavenging, but weakens in its powers in disease, old age, or neglect. To flush it out by sheer force is not to be thought of here. The indiscriminate use of violent purgatives has often ended in disaster where the obstruction required careful handling. To blast one's way forward with dynamite is worthy of the sappers and miners of the military profession operating in the bowels of the earth where the maximum destruction is the aim. Drastic purgatives, like croton oil, can raise a violent peristaltic cyclone, as it were, that may 'clear the atmosphere' for the time being, but may likewise, leave devastation behind it. The qualified doctor is to judge as to whether a condition calls for a drastic purgative—as when a dropsical fluid has to be depleted from the system. The lining of the bowel wall consists of cells that protect the wall. Strong purgatives can injure these cells and leave weak spots in the armour of defence, permitting the entry of germs into the blood. Prolonged stagnation would also damage these cells. If constipation is bad for health, indiscreet purgation may be worse. For laymen, the ideal is a laxative that empties the colon daily without interfering with our daily life, without impairing our appetites or causing the abnormal colic pains, or meddling with the processes of digestion, absorption or assimilation of foods. It is for everyone of us to find out by experience the kind of laxative and the dose of it that gives us such a result. What is food for one may act as purgative for another. There are those who use small quantities of castor oil in cooking their food.

Remedial Measures.—Every one of us can do something without a doctor's aid. Children must be taught punctuality in the attendance at the privy, just as we inculcate other wholesome habits into their formative

childhood. The o l d e r reprobates realise their negligence only when events compel a revision of their notins of physiology and of their philosophy in general. We have, of course, to provide sufficient and even attractive privy conveniences in every house and township, as it is the want of this that drives people to the public roads or to repress the natural call. Our aim is to preserve or restore the natural physiological impulse if possible, and to provide the conditions helpful to its exercise. Environments condition us to new habits ; we are in the hands of those who can fashion our habits for us. Without a privy at hand, matter must find lodgment within us or on the road side.

The **Diet** should be such as to secure with ease the daily evacuation without drugs. Sudden changes in quantity or quality might interfere with bowel tone. Neither the over-eating at a banquet nor the sudden swing to starvation, nor an alternation of these, is conducive to a steady maintenance of muscular tone. A canal, chronically distended by over-eating, would have little to contract upon during a starvation interval. Fasting does not always cure the ills of feasting. We know how difficult it is to swallow down a tiny pill, whereas a bolus of a size is easier gripped and passed down the gullet.

Our Habits Our Angels Are.— Regular tidal cycles are the rule in nature, for the physiological functions of organs, the vital tides of hunger, of secretions, or of excretions occurring with some degree of periodicity that gives us the cue to follow. The 'calls of nature' are timed to a regular rhythm under which living tissues function best. This rhythm disturbed throws the normal functions of organs into disorder. Nature is accommodating in her 'calls', so that we may within certain limits adjust our habits to suit our activities ; we disregard them at our peril. The early morning activities are helpful to bowel movements, as already referred to. Physical exercises also assist indirectly, as do '*namaskarams*',—always remembering of course that '*namaskarams*' performed vicariously for us by a paid proxy or agent can only be productive of good to the employee, rather than to the employer !

We, the wise Men of the East, have wisely retained the time-honoured orthodox and natural posture during the act of defecation, instead of the 'civilised' stool method that misses the pressure of the thighs on the colon. We score over the 'civilized' method in this, in spite of its social drawback that we can 'go to stool' even where no stool is provided ! Massage or gentle rubbing of the belly is also of help provided, of course, that it is done in the right place and in the direction of the flow, instead of by the aimless belabouring of the wrong organs that some people practise in their distraction and ignorance. When these m i l d e r manœuvres have failed, direct outside interference becomes a necessity.

Mechanical aids to secure an evacuation are only for occasional use, as to depend upon them is to presume to supersede Nature—resorting habitual extraction instead of voluntary excretion. Disturb as little as may be necessary the alimentary canal, beginning with the lowest rectum and mounting up, if need be, permitting the functions of digestion and absorption higher up to go on uninterruptedly. Very often, all that is required is to oil the canal just above the anus with a finger dipped in oil. The use of other irritating substances, like soap,as a routine is not recommended. If the above manœuvre does not succeed, we may inject into the rectum by means of a 'glycerine syringe' (with a blunt vulcanite nozzle about two inches long) some oil like olive

oil or other, about half an ounce. The nozzle of the syringe should be insinuated up into the canal for about 1½ or 2 inches. Glycerine is also used instead of oil, occasionally. Being harmless, the oil can be used oftener than Glycerine.

The Wash-out enema into the colon (bowels) is the next step when the above fails. The best fluid seems to be mildly saltish tepid water. Soap-water enema is apt to dissolve out the mucus necessary for the lubrication of the canal; the soap may even corrode and damage the cells of the wall if used often. One-half to one pint of water may do. The best position of the body is the knee-elbow position—on elbows and knees like a four-legged animal. The flow must be gradual and interrupted, and not so forceful as to rouse or provoke an extraordinary impulse for evacuation. Our aim is to permit the retention of the fluid between the masses and the canal until the contents are loosened. Obstruction by boulder-like masses may need an enema of some four ounces of oil to be retained at night and washed out next morning. Retain the fluid for some fifteen minutes or longer, lying down on your right side for the water to percolate. Excess of fluid injected tends to over-stretch the bowel wall; and, if repeated, it blunts the natural contractile impulse. Interfere as little as possible with the delicate reflex nerve mechanism of Nature, a mis-handling of which throws it out of gear, and causes a "traffic-jam", or obstruction.

(To be continued.)

Hygienic Principles *of the* ANCIENT HINDUS

By Dr. H. S. Nanjundesha Sharma, L.A.M.S.,
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A vast majority of people among civilised races are now becoming victims to such diseases which result from malnutrition as anæmia, tuberculosis, rickets, scurvy, etc. and every day, patent medicines and injections are invented in large numbers which puzzle the minds of medical practitioners as to which they have to prescribe for a particular disease. Diseases are increasing in number every day; even the names of all of them cannot be mentioned nor is it easy to differentiate one disease from another.

In olden days, there was no need for our ancients to establish research laboratories and clinics since they very rarely suffered from diseases and got themselves treated by natural means since their resistance was so strong that they could not contract organic or infective diseases very often.

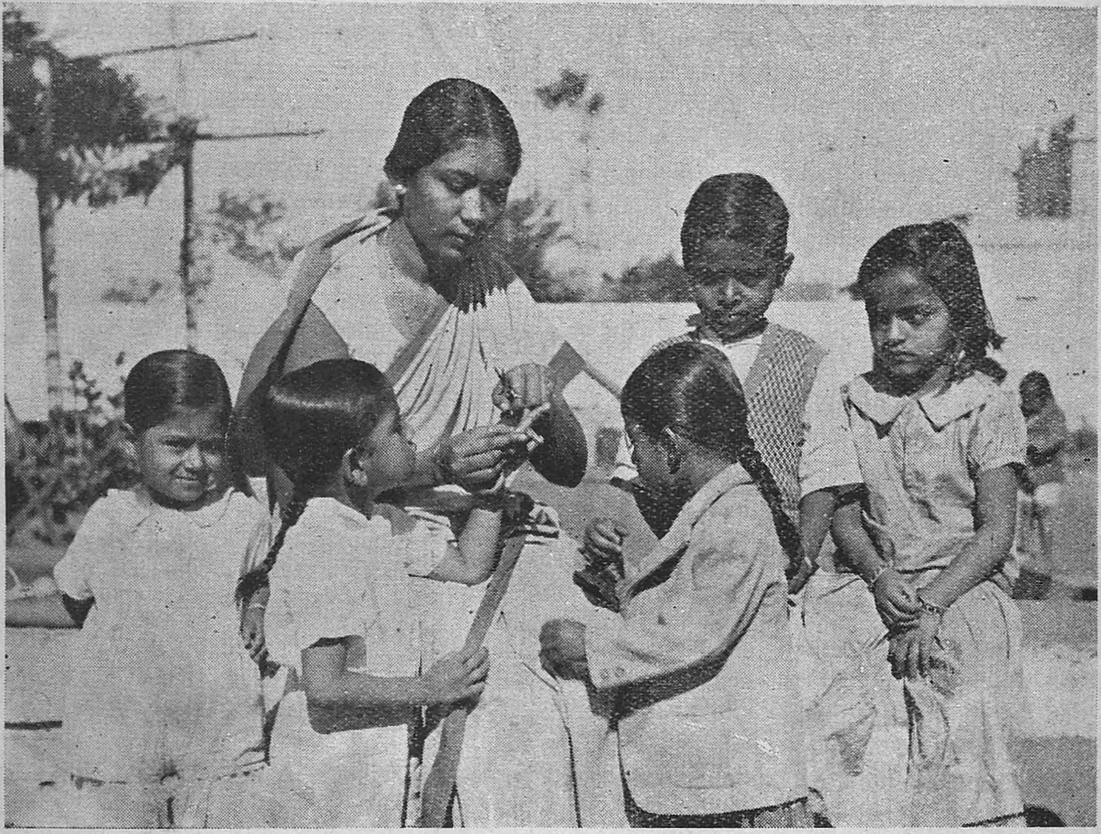
If we go through the Ayurvedic works of the ancient physicians Charaka, Susrutha and Vagbhatta, we come to know that they have dealt more with hygiene rather than any other branch of medical science. This shows that people, some thousands of years ago, cared much for prevention rather than cure. If we

strictly follow the principles of health mentioned in *Dinacharya* (daily life of man) and *Ruthucharya* (Climatology), we can never be in contact with any disease and can even live for more than hundred years—the maximum age prescribed for human beings.

Our ancient physicians have written elaborate chapters with regard to *Dinacharya* and *Ruthucharya*, (which teach personal hygiene both physical and mental) in their works and it is our duty to practise them to achieve *dharma* and *moksha*, the highest ambitions of man.

Ayurveda is the healing science of the ancient Hindus and the origin of which is briefly described by VAGBHATTA as follows:

Brahma, God of creation, introduced this science into the world and then it was taught by him to the two Aswinies. They taught that to Indra, (king of divine world) and he in turn to Athreyas, (sons of the sage, Attiri), Agnivesa and other Rishis. They divided it into several branches such as Suthra-Sthana, (basis of Ayurveda) Sarivasthana, (anatomy and physiology) Nidanasthana, (pathology) Chikithsasthana (medicine), Salyathanthra (surgery), Salakyathanthra (diseases of special senses), Prasutinthanthra and Sthriroga (Midwifery and Gynæcology) and so on. Accordingly they had their disciples specialised in the respective subjects.



Cutting the finger nails of children every now and then with a view to prevent infection is one of the hygienic principles of the ancient Hindus

The above picture shows a school-mistress in Mysore, cutting the nails of school-children.

According to VAGHBATTA's, it is learnt that one who likes to live long should preserve his health by regulating his daily life as follows:

One should get up early in the morning (between 4 and 5 a. m.) and after answering the calls of nature by the regular movements of the abdominal muscles, (education of labour) he should look towards the oral cleanliness, as the teeth are the first and the most important organs of digestion and if they are not kept clean they are subjected to such diseases as pyorrhœa, caries etc. and the food which passes through them becomes infected and hence the digestion will be upset and consequently gastric trouble will arise. To avoid these troubles, it is quite necessary to keep the mouth and teeth clean by antiseptic measures. To do so our ancient physicians had found a simple plan. The sticks of different trees containing different tastes (pungent, bitter and astringent) the length of which being about twelve inches and thickness about that of a little finger should be selected and their ends should be chewed by the teeth and the juice spit out. The fibrous structure of the stick forms a brush by which the teeth may be rubbed and cleaned. Generally, the sticks of Neem, Pongam (Karanja), and Catechu are recommended for this purpose. The juices containing the different tastes come in contact with the teeth and as they possess germicidal power, they kill and prevent micro - organisms from developing and the astringent taste makes the teeth to be firm in their sockets. By this we can make out that long before the dawn of civilisation the antiseptic theory was known to our physicians. After the teeth are cleansed in the above manner the ablutions should be performed with pure water. The daily performances of Hindus depend upon the principles of health. It is quite necessary that one should take physical exercise from the health point of view and according to the modern theory it is learnt that the sun's rays contain vitamin D and it is a part of treatment in tuberculosis to expose the affected part to the morning sun with the intention of adding vitamin D by means of a natural source instead of by ultraviolet therapy. To satisfy these two conditions our ancients have prescribed the worship of the sun under the name '*Suryanamaskarams*'. By performing this a good amount of exercise is given to the muscles of the arms and thighs and much of the time is spent under the sun's rays. There are so many things which are prescribed by the ancients from the health point of view. And if a comparative judgment is made, their principles are all according to the modern method of healing science. But, we, on account of our ignorance criticise them and condemn them as useless superstition and neglect them.

Advantage of Walking

"School play-grounds do not always give sufficient scope for real activity. I would suggest that schools be given permission to go for a good walk when fields are unfit for play, in fact, I would strongly advocate the inclusion of a weekly walk on all school time-tables. The slouching gait that one sees on the streets is, no doubt, due to lack of walking exercise. Some of the older boys are guilty in this respect. Although the time-tables at the schools are satisfactory, I think that these older boys want more physical work, and walking should be part of it. They cannot all be expert at games so that when they leave school, their physical activities are somewhat limited."—*Arogyamargam.*

MEDICAL PROGRESS

In its Preventive and Public Health Aspects

By
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(Contd from p. 159 of June '40 issue of Health.')

II. **Diseases that spread largely through bowel discharges**—The control of infections, which are spread through bowel discharges, such as, Cholera, Typhoid fever, etc., is the most notable achievement in Preventive Medicine. The causes, modes of transmission and prevention are well understood now : "Sanitation here finds its first fruitful field ; hygiene, its useful lessons ; and immunology its special applications."

1. It is now recognised that *Typhoid Fever* is an infection against which the individual alone cannot protect himself wholly, without the aid of the community. The carrier problem is an important one in the case of typhoid and para-typhoid fevers. A carrier employed as a cook, waiter, nurse, or in a dairy is a special menace. Carriers in dairies have been responsible for many milk-borne outbreaks. It is necessary to restrict the activities of carriers, so that they cannot infect food or their surroundings.

Preventive inoculations are now undertaken for typhoid and para-typhoid fevers. Many other measures have been devised for controlling the spread of the disease.

2. *Cholera* :—The home of true Cholera is said to be the Gangetic delta. The nature of this disease is well-known. It is spread only by man from place to place. Healthy or passive carriers are important and insidious means of spreading the infection. They may also suddenly develop the disease. This disease can be brought under coutrol by installing protective water-supply and by injecting subcutaneously the Haffkine Prophylactic Cholera Vaccine. The immunity produced by this protective inoculation lasts only for about a year. Various preventive measures are being undertaken to control an epidemic of cholera.

3. There are two kinds of *Dysentery*. One type of Dysentery is due to the dysentery bacillus and the other to a protozoon parasite. Amœbic dysentry occurs mainly in an endemic form and does not cause explosive outbreaks, such as we see in typhoid fever and bacillary dysentery. Food, fingers, flies, contacts and carriers play an important part in the spread of the disease, as in the case of typhoid fever. The specific treatment for amœbic dysentery has been found but in the case of bacillary dysentery, no curative vaccine has yet been found successful. Preventive measures, similar to those for the control of typhoid fever, have to be depended upon.

(4) *Hook-Worm Disease* :— Hook-worms affect the health and vitality of millions of people in the tropical countries. The infection gives rise to a severe form of anæmia. Hook-worm

disease presents sanitary problem of first magnitude in all tropical countries.

Hook-worm infection differs from bacterial infections in that the worms do not multiply within the body. The larvæ of the worm get into the body through the skin from time to time, usually over a long period. Each worm in the intestinal tract represents a separate larva, which has passed through the skin.

The prevention of hook-worm disease is based mainly on sanitation, the prevention of soil pollution. The treatment of infected persons will diminish the amount of soil pollution. The wearing of shoes is an effective protection, but it is so difficult to enforce this measure. The principles of prevention of hook-worm disease are easy in theory, but their application is difficult in practice, on account of the widespread character of the disease. Education of the masses is an important factor in its control. Effective remedies are now available for its treatment.

After all, the prevention of hook-worm disease is a question of decency and cleanliness. With cleanly habits, there would be no soil pollution and the disease would be checked. Hook-worm campaigns in rural areas have contributed much to the education of the people. The collateral benefits are, incidentally, the control of other diseases also, such as, typhoid fever, dysentery, etc.

III. Diseases which spread largely through discharges from the Mouth and the Nose.—As regards the diseases which spread largely through discharges from the mouth and nose, we have much less control over them than in the case of the intestinal diseases. Infection spreads not only through the discharges from the mouth and the nose, but also in many other ways. The infection may be contracted through food and drink, as a hand-to-mouth infection or by cups, spoon, etc., that are mouthed.

Cholera generally breaks out when there is water-scarcity. Here is an hygienic method adopted to supply water in pipes fitted to a van to prevent pollution when water-famine is severe.

1. Among this group, *Tuberculosis* is the most frequent and widespread of all the major infections. The toll falls heaviest during the period of life of greatest usefulness. It was estimated that 30% of all

deaths in Englad between the years of 50 and 60 were due to pulmonary tuberculosis alone. In all other progressive countries, tuberculosis is on the decline, whereas in India, it is on the increase. The disease is more prevalent among the poor and its prevention has become a social problem. Poverty, which leads to poor nutrition, bad housing and over-crowding, diminishes the body's resistance to the disease. The social and economic conditions of the masses of the population must be improved before there can be any decline in the tuberculosis mortality rate. Science has shown the way for the control of this disease, but it remains for the society to apply that knowledge.

Preventive measures against tuberculosis are based on two important facts.

(a) The tuberculosis infection mainly spreads from man to man through tuberculous sputum.

(b) Infected milk is another source, by which the infection is carried from the cattle to children.

Preventive measures, therefore, are directed towards firstly by avoiding the infection and then increasing the body resistance through personal hygiene.

2. *Diphtheria*:—This is an instance of a disease, in which the progress of our scientific knowledge has enabled us to acquire a complete control over its spread. We know the cause of the disease and the mode of its transmission. We are able to check its spread. We have been enabled to undertake also preventive inoculation of susceptible individuals. Both active immunity as well as passive immunity have shown their value in the prevention and treatment of diphtheria.

3. *Pneumonia* :—The term 'Pneumonia' includes a group of varied diseases due to different causes but all producing inflammation of the lung tissues. It is the most prevalent and fatal of all acute diseases. One attack of lobar pneumonia does not confer any immunity. Recurrence is more common in pneumonia than in any other disease. The prevention of pneumonia is still a major problem.

4. *Influenza* :—This is an acute, highly communicable, febrile disease. It sometimes breaks out in severe pandemics. When it sweeps over the world in pandemic form, it is the most serious on account of the large number of people attacked in a short time. Influenza occurs at all seasons of the year with a preference for the cold weather. We are, yet, unable to control the disease, as it is difficult to control contact between human populations. No successful protective vaccine has so for been discovered. We depend much on prophylaxis.

5. *'Common' Colds* :—More people probably suffer from common colds than from ony other single ailment. It is unfortunate that the public should still consider the common cold to be trivial in nature. It has been shown that the disease is caused by a filtrable virus and spreads through the nasal discharges. Colds are contracted from other persons having colds, just as diphtheria is contacted from diphtheria carriers or sufferers. Common colds are most contagious during the earlier stages.

If persons would isolate themselves by remaining in bed during the first three days of their cold, they would not only benefit themselves, but would largely prevent the spread of the infection. The prevention of the common cold continues to be a very important problem in preventive medicine, because man is the source and fountain-head of these infections. Each case is a focus for a further spread of the disease. Carriers also play an important role in its dissemination. It can be controlled, only if

the community is educated enough to understand the principles of personal prophylaxis and the importance of obeying the public health measures, undertaken for disease prevention.

IV. **Insect-Borne Diseases.**—The fact that diseases may be transmitted through the bites of insects was suspected for years, but it was not until 1893 that Theobald Smith showed the relation between the Texas Fever of cattle and the tick which is the carrier of the disease. Since that time, scientific discoveries in medicine have added many other diseases to this list of insect-borne diseases. All the blood-sucking parasites are now regarded as dangerous. Some of them play the role of the intermediate host in the biological way,as for example,the little wounds may allow the entrance into the body of such infections as, Erysipelas, the pus-cocci, anthrax, tetanus and other micro-organisms.

Malaria is an instance of the biological transmission of disease in that, part of the life cycle of the parasite is passed in the mosquito. But, insects may transfer infections mechanically in a variety of ways. The insect-borne diseases are types of true endemic diseases, and they are necessarily limited in their geographical distribution to the habitat of the insect host. The prevention of malaria is a very good illustration of the importance of studying the life-history and habits of the insect vector.

For the control of the insect-borne diseases, it is not always necessary, nor is it always possible to exterminate the particular insect host. A material reduction in the number of insects in a particular area will control and often result in an elimination of the disease. An effective campaign against mosquitoes, flies, or other insect pests requires more time and much money. Further, it requires the assistance of the Entomologist, the Engineer and the practical Administrator.

The suppression of insects and household vermin is essentially a question of cleanliness. Their breeding places have to be suppressed. Food must be protected from them. Cleanliness and incessant care have to be exercised in all parts of the household, including the backyard and the surroundings of the house. Science has demonstrated the danger from insects. What is required is the application of this scientific knowledge for the cleanliness of the household and the enforcement of such cleanliness by municipal corporations.

1. Various measures have been undertaken for the control of *Malaria*. *Dengue* is also a fever, which is spread by one species of *Mosquito*. Dengue is supposed to be caused by a filtrable virus, which is carried from one infected individual to another by the mosquito. The prevention of dengue, like that of malaria, depends upon the control of the species of the mosquito, which spreads the disease. Similarly, in *Filariasis*, mosquito acts as the intermediate host. Therefore, the prevention of malaria, dengue and filarial diseases resolves itself fundamentally into a mosquito campaign.

2. *The common house fly* has been known to transmit *Typhoid Fever* and other intestinal infections. Flies undoubtedly play the same role in *Dysentery* and *Cholera*. They can transmit the infection of small-pox or other skin infections from one person to another. They may infect food with tuberculous sputum. The adult house fly is a veritable reservoir for bacteria. It can transmit diseases directly or through infecting food. Therefore, its suppression is a very important public health measure. It resolves itself simply into a matter of cleanliness. To prevent breeding places for the common house fly,

organic cleanliness of our environment is necessary.

3. *Plague*:—Plague is primarily a disease of the rat and only secondarily of man. The Indian Plague Commission has established beyond doubt that plague is transmitted from rat to rat and from rat to man through the agency of the *rat fleas*. The control of rats and other rodents has become a serious problem in preventive medicine. The rat is responsible also for rat bite fever and infectious jaundice. Rats and mice also carry other organisms connected with food infections. Various measures have been undertaken for the suppression of the rat population and for the destruction of rats.

4. *Lice and Ticks* are known to transmit *Relapsing Fever*. Lice also transmit *Typhus Fever* and *Trench Fever*. The wounds caused by their bites are contaminated by their excreta and thus the infection enters into the body.

The control of vermin infestation and louse-borne diseases was one of the important sanitary and medical problems of the last world war.

Conclusion.—The above is a brief account of what medical progress has done in the control, prevention and treatment of some of the important diseases. The progress of the medical science has enabled the advanced countries in the West in the building up of an efficient Public Health Administration. The purpose of a public health administration is to improve the physical well-being of the general population. It aims at the promotion of health as well as the prevention of the disease. "The public health administration would function better, if it is under professional rather than under political control. "The prevention of diseases is not the sole object of the public health administration. It aims at improving health, increasing efficiency and promoting happiness and affords better opportunity for service." The progress and propserity of a country can be measured by the efficiency of its Public Health Administration.

In our own Presidency, a Public Health Act has been recently placed on the statute book and it is one of the important acts, which will stand to the credit of the Hon. Minister Dr. T. S. S. Rajan and of the Congress Government. The Act is very comprehensive in its scope. It is hoped the legal sanction will be forthcoming for the enforcement of the various sanitary provisions contained in it. Let us hope that our country will soon become 'health conscious' and rise to the standards of health, which have been reached by other countries.

Do Not Spit

Spitting on public roads, streets, lanes and other thoroughfares is very harmful to public health.

Spit usually contains disease germs which, when wet and dried, either stick on to the feet of the passers-by or get inhaled by them, thus making them carriers of infectious diseases.

Tuberculosis is a dangerous disease that takes away many young and healthy lives in our country. Spit infection is one of the main causes responsible for this disease.

In the interests of Public Health, can you not control this indecent, filthy and harmful habit and thus save the country from the havocs of dangerous diseases?

You will do this to-day. Determine that you will not spit on public roads.—*Municipal Gazette*.

SUNSHINE AND HEALTH

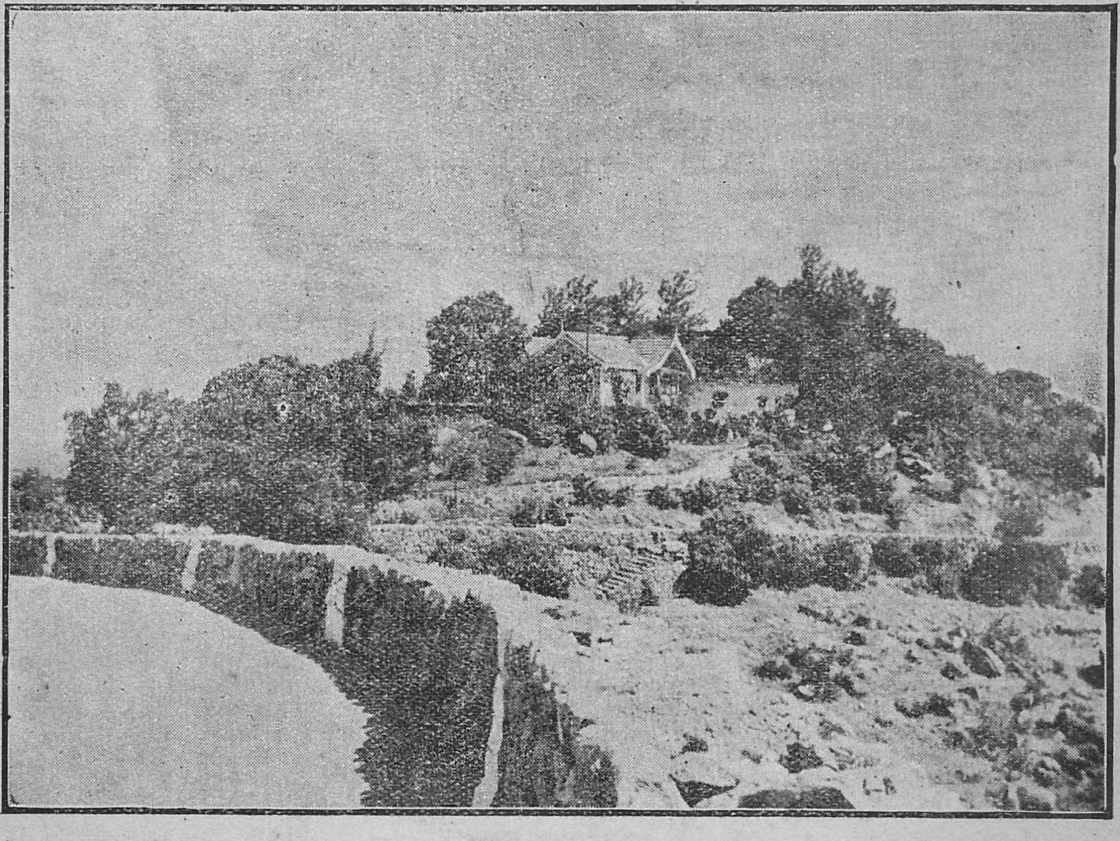
By

Rebati Mohan Choudhury,

Sanitary Officer, Faridpur (Bengal).

THE sun is said to be the fundamental cause of creation and preservation of the solar system. We get light and heat from it. There are still many countries on the face of the globe where it is worshipped, in its majestic awe, as God or next to God.

It will be no exaggeration to say that we owe much of our food and staple food of mankind in general. I like to discuss a few points relating to our health and how much



A hill station with fresh air and bright sunshine is best suited for a Sanatorium for tubercular patients.

clothing to Sun. It exerts a good deal of influence upon all beings, animate or inanimate. It is mainly the vegetables that constitute our health and body. They go into the formation of our system as food and drink. The vegetables accumulate the rays of the sun in their leaves, stalk and roots, which form the sunshine is indispensable to its preservation.

The Sun as a Disinfectant.—As a disinfectant, it is the most effective, cheap, and easily available in adequate quantity without any cost whatsoever, most of the bacteria die in it and very few can withstand full exposure to it for a considerable time.

Cholera, tuberculosis, dysentery and paratyphoid germs are destroyed by short exposure. Water, which forms the medium for the germs of all water-borne diseases, undergoes fifty per cent purification through the effects of the sun. The most objectionable sputum, urine, cough and other discharges from the body, are made inoffensive through their exposure to sun not to speak of anything else. About three-fourths of the disinfection of the whole world is performed by the sun. It is so active and so useful to us.

Therapeutic Value of the Sun.— It cures many diseases. Considerable portion of the nature cure is effected by it. It is full of vitamin D. It cures rickets. No one can remain indifferent to any cause which is known to improve or maintain the health of either the individual or race in general. Many things have been known about the functions of skin. And it is now recognised that the skin is an organ. It absorbs certain elements required for the health and it exudes in the form of perspiration certain impurities which would be retained in the blood-stream. The affinity between blood and skin is close indeed. It performs definite function. It controls temperature of our body. It can absorb certain rays from the sun and store up the vital vitamin D to be reabsorbed into the blood stream as required. Hence the recommendation of sun-bathing by the celebrated physician, WELBY.

The tonic effects of the sun and air are indisputable and in many diseases suitable exposures have been known to effect reliable cures. In Switzerland where treatment of tuberculosis is carried out more intensively and on a larger scale than in any other country, complete and almost complete exposure was practised. So valuable have the ultra-violet rays, in particular, been found to be that special lamps are manufactured to emit these rays and make it possible for them to be enjoyed indoors. Now sex glands produce hormones or secretions which pass directly into the blood stream and are of immense importance to health. A deficiency in this secretion causes a lowering of vitality and the the simplest and most satisfactory method of rectifying such a deficiency is by stimulation and encouragement of glands themselves. The free access of sunlight or the application of ultraviolet rays is claimed upon good authority to have this effect.

Ductless glands appear to be particularly susceptible to light treatment which is used professionally in cases of goitre, unfortunately a common disease of thyroid gland and in rickets which is caused by a deficiency of vitamin D.

Another point to be remembered is that the ultra-violet rays of the sun are present during all the hours of day light. In or near the manufacturing towns where the air is polluted with smoke and other vapours, a proportion of these rays is filtered out and also on foggy or cloudy days. But where the air is perfectly clear, these rays are as powerful in winter as they are in summer.

It is not only the sun which imparts the benefit. All light helps to stimulate the action of the skin and is so beneficial to the whole body. The ultra-violet rays will not penetrate clothing. So that any part of the body which is clothed is deprived of these rays. (*Ibid*).

Hence so many nude societies are coming into existence * and it is nothing but the scientific worship of the sun. We respectfully pay our homage to the 'Rishi' of Gayatri.

DISEASED TONSILS AND ADENOIDS

(Issued by the Travancore Public Health Department.)

DISEASED tonsils and adenoids are common ailments mainly affecting children. These complaints often go together. But sometimes adenoids or enlarged tonsils may occur alone. They show an appalling incidence among ill-nourished children. In many, the affection is mild and easily remedied. In certain cases however, it takes a serious and obstinate course.

The results of school medical inspection indicate that many school children suffer from enlarged tonsils and adenoids. These abnormal conditions are highly detrimental to physical and mental development. They not only impair the health of the children but also retard their educational progress. Enlarged tonsils and adenoids seriously interfere with normal respiration and cause numerous physical defects. They may breed disease germs and discharge poisonous products into the system. They are directly responsible for a large volume of ill-health among school children. Due to diseased tonsils and adenoids, many bright and intelligent school children degenerate into dullards.

Structure and Functions of Tonsils and Adenoids.—Adenoids and tonsils are masses of lymphoid tissue. The adenoid tissue is located in the upper part of the throat behind the inner opening of the nasal passages. Normally present in childhood, it practically disappears by the 20th year. When it becomes diseased or abnormolly large, it causes trouble. The tonsils are two structures one on each side of the throat. They are always present at birth and unlike adenoids do not disappear as the child grows older. They remain throughout life, gradually contracting and becoming smaller unless diseased. When abnormally enlarged they obstruct the air and food passages at the throat. Tonsils are more liable to become diseased than adenoids.

Tonsils and adenoids probably serve a useful purpose in childhood. Situated at the very gateway of both the respiratory and digestive systems, the tonsils constitute a barrier against infection. But when diseased, they not only become useless but also act as a serious menace. They may get so severely damaged that they lose all power of resistance against infection. The affected tonsils may even become reservoirs of disease germs. Chronically septic tonsils should be removed, lest they should form a constant source of infection and ill-health. Infection may spread from them to various parts of the body through the blood stream and lymphatics. Diseased tonsils are often responsible for a multitude of complaints such as frequent attacks of cold, bronchitis, rheumatism, heart disease, muscular pains, chronic ear diseases and tubercular infection. Malnutrition and general decline in health often follow diseased tonsils.

Adenoids.— Adenoids ordinarily affect children between the ages of 3 and 12. As puberty approaches, the adenoids dwindle and finally disappear. Though simple, this complaint can produce several serious defects. Its symptoms are due to infection, extension of inflammation and nasal obstruction. The direct result of adenoids is the establishment of mouth-breathing. The other main effects are chest deformity, changes in facial expression, deafness and stunting of growth.

Normally breathing takes place through the nose with the mouth

closed. The nasal passage is an irregular canal with a large area of warm, moist, mucous surface. By passing over this surface, the inhaled air is warmed and the dust, dirt and germs in it are filtered out. The air thus entering the lungs is warmer and purer than it would be if breathed in through the open mouth. If the adenoid growth enlarges and obstructs the nasal passage, the child can breathe only through the mouth. Such mouth-breathing deprives the voice of its normal resonance. Aptly has it been said "shut your mouth and save your life."

When mouth-breathing has persisted for a long time, marked changes occur in the face, mouth and chest. The affected children look dull, stupid and apathetic. They are unable to concentrate attention upon their studies. Sleep is often disturbed and is characterised by snoring. Night terrors and bedwetting are common features. Hearing is sometimes affected. Repeated attacks of cold, sore-throat and headache set in. The senses of taste and smell may be impaired. A child with adenoids presents a characteristic appearance with irregular projecting teeth, narrow nostrils and a vacant expression. Bad cases often develop the pigeon breast, a common sequel of this disease.

Malnutrition and physical and mental under-development are the general ill-effects.

Diseases of Tonsils.—The diseases of tonsils may be either acute or chronic.

Acute inflammation is caused by virulent bacterial infectien. Though this condition is common in children and young adults, it is rarely seen in infants or the aged. It suddenly sets in with sore-throat, rise of temperature and general prostration. The tonsils become enlarged red and painful. Swallowing of food is rendered difficult and even breathing may be obstructed. The lymph glands in the neck get enlarged and tender. These symptoms usually subside in three or four days. Repeated occurrence of acute attacks results in chronic enlargement of the tonsils. This chronic condition is highly injurious to the mental and bodily development of children.

A severe form of tonsillar disease is caused by the development of abscess in the tonsils. This is marked by high temperature, severe pain, swelling in the throat and enlargement of the glands in the neck. Opening the mouth is painful and swallowing of food becomes impossible. Sometimes even breathing is obstructed. If not opened, this agonising condition is prolonged till the abscess bursts, discharging profuse quantities of purulent matter.

Treatment.—Complete removal of the diseased tonsils and adenoids, by a competent doctor, is the best remedy. The operation should be done early in life before permanent damage occurs. It may be undertaken any time after two years of age. Delay may lead to permanent defects depriving the child of opportunities for normal progress.

If the adenoid overgrowth is only slight, careful attention to general health may suffice. In pronounced cases, the removal of the diseased tissues, is essential.

Palliative measures may be adequate for mild complaints of enlarged tonsils. Open air country life and administration of cod liver oil are highly beneficial. The mouth should be kept clean and the throat gargled with warm salt solution.

The symptoms may be relieved by painting the throat with Mandl's solution or glycerine acid tannic.

Patients with acute tonsillar inflammation should be confined to bed. Only liquid diet should be allowed. The bowels must be kept free. The patient requires competent medical attention.

The only radical remedy for chronic tonsillar disease is operation.

Any abscess occurring in and around the tonsils, should be opened by a competent doctor.

Prevention.—The eating, breathing and sleeping habits of children should be carefully observed. Their teeth and mouth should be examined by a competent dentist. The eyes, nose, throat and ears also require medical examination. On the very first signal of any serious involvement of tonsillar or adenoid tissues, the child should be taken to a competent doctor for necessary attention.

Topics from Medical and Health Periodicals

Obstruction to Happy Life

One of the amazing things about some men is that they persist in doing the things that obstruct the way to a happy and useful life. They know the destructive effect of self-pity, selfishness, anxiety and the like, but they stubbornly refuse to give them up.—*Grenville Kleiser.*

Vegetarianism

Much valuable research work on diet could be accomplished by practitioners prescribing and noting the effect produced on patients who were willing to co-operate and make trial of different diets. Fish, flesh, fowl, vegetables and fruit are man's natural diet and when partaken of in suitable quantities maintain bodily health and vigour. At the same time, the influence of age, sex, habits and environment must be brought into consideration, while the supreme importance of good cooking must ever be kept in mind. Moreover, the quality of the food is likewise of importance, for the nutritive value of bad food badly cooked may be nil, while the harmful effect may be pronounced.—Dr. Bayley in *The Medical World.*

Adult Human Pulse Rate is Variable

"The adult human pulse rate is considerably more variable than many persons think," Hygeia, The Health Magazine declares.

"Extensive and exact studies of the measurement of the heart rate of persons in New York City have shown pulse rates ranging from 55 to 120 beats per minute in a healthy person in a normal twenty-four hour cycle."
—*Texas State Journal of Medicine.*

Climate in Tuberculosis Treatment

There are various conceptions as to what constitutes an ideal climate for the treatment of tuberculosis, but several authorities agree that certain climates are beneficial only to the extent that they permit patients to spend a maximum number of hours comfortably out of doors. A regimen of regulated rest and exercise, proper food and open-air life is considered to be the fundamental essential in the treatment of tuberculosis, and the part played by climate is believed to be subservient to the other more important considerations.—Moriyama, I.M., and Herrington, L.P.—*Amer. Rev. of Tuber. March 1939.—Minnisota Medicine.*

Soot in City Air and Cancer

Soot-laden city air may be causing cancer of the lungs in cities. Conclusive evidence for this is lacking, but strong circumstantial evidence is brought forwad by Drs. M. G. Seelig and E. L. Benignus of the Barnard Free Skin and Cancer Hospital, St. Louis, in a report to the *Am. J. of Cancer.*

Human death records and animal studies furnish the evidence with which the St. Louis scientists pin the guilt of causing cancer into soot in the city air.

Figures from the U. S. Census Bureau show that lung cancer deaths are more numerous in cities than in rural areas. The relation between the greater number of deaths and the greater amount of soot in the air is close enough, the scientists state, "to warrant more activity on the part of public health authorities in the various anti-smoke campaigns."

The tar in soot and the way soot invades all the structures of the lungs make it capable of causing cancer.—*The Medical World (America).*

Punjab Public Health: Investigation on Quality of Turmeric

An investigation recently undertaken by the Punjab Public Health Department on the quality of turmeric, a curry powder, sold in the market, has shown that large quantities of the stuff sold as turmeric is, in fact, powdered rice starch coloured with metanil yellow–a harmful organic dye.

The Agricultural Marketing Adviser with the Government of India has informed all the provincial Marketing Officers about the general quality of turmeric sold in the bazars in order that they may study the question of putting a reliable standard quality article on the market.—*The Bengal Public Health Journal.*

Should Tuberculous Persons Marry?

A question which is frequently asked is this: Should a Tuberculous person marry and have children?

In the male the danger of infecting others is not so great as in women, and in her the question is further complicated with that of child-bearing, which increases the personal risks enormously. The decision should be made by the physician, for he alone will be able to determine how far the disease has advanced, what are the chances for recovery and whether or not the youngsters could be protected from dangerous exposure. It is usually considered unwise for a tuberculous mother to nurse her baby, though this, too, is a question which the doctor should decide.

Tuberculosis is not hereditary, but weak lung tissue is. Thus, when children who are already predisposed to the disease are in close association with their actively tuberculous mother or father, they have a good chance of contracting the ailment themselves. They may not show symptoms at the time, but they are quite apt to become the tuberculosis victim of tomorrow.

And how may we protect ourselves, you and I, who probably come within the large percentage of individuals? By frequent health examinations if necessary, maintenance of a high degree of resistance through proper living, and avoidance of closer contact than is necessary with the organisms that cause the disease, especially by isolating in sanatoriums, every person known to have an active case. Here they will live in the ideal conditions so important to recovery and by so doing will protect society as a whole.

Tuberculosis Truths:— Tuberculosis is usually acquired in childhood.

It is not hereditary.

It is most frequently passed from person to person in families.

It may also be spread by milk from tuberculous cattle and by tuberculous meat.

Early discovery and efficient care mean early recovery.

No case of tuberculosis springs into being spontaneously–every case comes from another.

Tuberculosis can be uncovered by modern methods and conquered by modern weapons.—*Ida M. Blissard in Hygeia, Chicago.*

Tuberculosis in the Aged

It is known that when old people are found to have tuberculosis it is almost impossible to teach them to take care of themselves and protect others from infection. They will not cover their mouths during a cough or sneeze, nor will they try to protect or destroy their sputum. Their idea is that they have lived all these years with this old cough, it will not hurt them and they do not see how they can hurt anyone else. Elderly people with a chronic cough and positive sputum are a menace to society and should be isolated.—*C. L. Harrell, M.D., Virginia Medl. Monthly, Nov. '39.*

Human Heart is Like an Engine

The human heart is an engine that functions with miraculous efficiency if its owner will cooperate by refusing to overburden it unnecessarily, George A. Skinner, M.D., Berkeley, Calif., declares in *Hygeia, The Health Magazine* for March.

The heart, like other engines, functions best after a period of "warming up," he says. The sudden acceleration of the heart that always accompanies suddenly increased activities is likely to cause disturbance. For example, he points out, "Numerous business and professional men are so occupied with routine duties, most of which are sedentary, that they do little to keep up regular physical exercise. Unfortunately, the usual efforts to get in a week's or a month's exercise in a single afternoon are not a success, never have been and never will be. Muscles to be in good condition (and the heart is a powerful muscle) must be used regularly and often, even if not for long each time. A small amount of exercise taken daily is much more valuable to the whole physical economy than an excessive amount occasionally. The former is of lasting benefit, the latter likely to be not only harmful but often actually destructive."

Practically every human being starts life with a perfect "engine," Dr. Skinner declares. Although the heart is able to protect itself partially against many influences that affect other parts of the body, all acute diseases have some effect on it, for it must often work under difficult conditions during such periods. Such diseases as rheumatic fever, syphilis and gonorrhœa are ones which have the most pronounced effects on the heart.

The heart may also be impaired by the formation of damaging chemical substances in the body, as the result of eating more than the body can utilize, not getting rid of the wastes properly or imbibing or inhaling substances such as alcohol, tobacco and drugs.—*North West Medicine.*

Book Reviews

The Improvement of Sight by Natural Methods—*By C. S. Price*, M.B.E., D.O., etc., Third Edition, London: Messrs. Chapman and Hall, Ltd., 11, Henrietta Street, Covent Garden. Price. 6/ net.

Sight is the greatest blessing with which human beings are endowed and if that is lost, all is lost. Universe has no charm for the blind or for those with defective eye sight. So, every endeavour must be made to preserve eye-sight and this book treats about the natural methods of preservation of the eye-sight and prescribes certain excrcises for the muscles of the eyes, which, if practised, would cure various eye-ailments such as Squint, Astigmatism and so on. The Scientific world may be sceptic about the results and the laymen may also doubt the efficacy of these methods, but when it is recognized that special exercises strengthen and develop other parts of the body, there is reason to believe that these eye-exercises will also go to strengthen and develop the eyes. That the book has already gone through two editions is convincing proof of the absorbing interest which laymen take in the methods suggested by the author and we, therefore, heartily commend this book to our readers.

A Thousand and one Gems of Health.—Part I. Compiled and published *By Dr. Jatashankar Nandi*, N.D., (New York), N.D. (Bezwada), D.DT., M.N.S.A., Health Home, Sabarmati, Ahmedabad. pp. 250-price Rs. 1/8.

This book contains 500 health tenets, culled from various authors, administrators and journals, dealing with almost all the subjects that comprise Health — 'the fundamental truths, both hygienic and curative, which if acted upon ensure not only the prolongation of life to its utmost span of natural existence but also its restoration to normal functions when diseased, by infallible natural methods of cure.' The compiler must have taken considerable pains in collecting them and publishing them in a book form and we have no doubt that the book will prove a good guide to every householder who is anxious to keep himself and his family healthy and long-lived. At the end is given an analysis of the contents under the several heads such as Air, Bath &c. arranged in alphabetical order which will prove useful for ready reference.

The Greatness of the Siddha System of Medicine — *By Dr. N. Subramaniam, L.I.M.*, The Subsidized Rural Siddha Dispensary, Alangiem, Coimbatore Dt.

This treatise written in Tamil gives a succinct survey of the evolution of the Siddha system of medicine from the earliest times up to the present day. The style is lucid and the matter is interesting. The Tamilians owe a great debt of gratitude to the author for having brought out the greatness of the Siddha system of medicine to the fore-front and we hope every encouragement will be given to this system of medicine and greater effort made to place it on a scientific basis.